

Notice of Allowability

Application No.

10/036,718

Examiner

Martin Lerner

Applicant(s)

WATANABE, YASUHIITO

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2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1 to 18.
3. ☒ The drawings filed on 21 December 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 10/16/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art of record does not disclose or reasonably suggest an audio signal encoding apparatus having the features of coded mode inputting means, maximum scale factor band table storage means for storing initial maximum scale factor band information, an initial maximum scale factor band calculation means for calculating an initial maximum scale factor band on the basis of frame length determining means and coded mode information with reference to the initial maximum scale factor band information and signal-to-mask ratio threshold value information stored in the maximum scale factor band table storage means, and maximum scale factor band calculation means.

Neo et al., commonly assigned to assignee Matsushita Electric Industrial Co., Ltd., discloses inputting means (A/D converter 112), frame length determining means for judging a short-length frame when the audio signal is transient and a long-length frame when the audio signal is stationary (block size determination module 104: column 1, lines 46 to 60: Figure 1), FFT analyzing means (MDCT modules 105-107: column 1, lines 46 to 60: Figure 1), psychoacoustic model analyzing means for calculating a signal-to-mask ratio (column 8, line 55 to column 9, line 19; column 9, lines 32 to 42: Figure 2: Step S202), spectral processing means (QMF filter 101: column 1, lines 26 to 46: Figure 1), and quantizing and encoding means (quantization module 110: column 2, lines 7 to 11: Figure 2). *Neo et al.* does not reasonably disclose coded mode inputting

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means, maximum scale factor band table storage means for storing initial maximum scale factor band information, and initial maximum scale factor band calculation means for calculating an initial maximum scale factor band on the basis of frame length determining means and coded mode information with reference to the initial maximum scale factor band information and signal-to-mask ratio threshold value information stored in the maximum scale factor band table storage means. Generally, *Neo et al.* discloses a process for computing thresholds from signal-to-mask ratios based upon a psychoacoustic masking model and whether a block is a long block or a short block, where a signal-to-mask ratio is computed from a highest frequency unit u_{max} by iteratively comparing masking thresholds to a next higher or next lower frequency unit u_{mr} (column 12, line 63 to column 14, line 59: Figures 6 to 9). However, *Neo et al.* omits any clear disclosure of at least calculating an initial maximum scale factor band on the basis of coded mode information, which is disclosed to be a sampling frequency or bit rate by the Specification, Page 9, Lines 3 to 6. Applicant's Specification, Pages 13 to 15, Figures 4 to 7, show initial maximum scale factor band information stored as tables for predetermined bit rates and sampling frequencies, which is not shown or suggested by *Neo et al.*

Applicant's invention differs from the embodiment discussed as prior art on Pages 1 to 3, Figures 18 and 19, of the Specification, by including an initial maximum scale factor band calculation means and a maximum scale factor band calculation means, where the maximum scale factor band calculation means takes account of psychoacoustic model analyzing means. (Compare Figures 1 and 19) The prior art

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embodiment has only a maximum scale factor band calculation means. Applicant's Specification states an advantage of improved encoding of audio signals that may be biased to a particular frequency range.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (703) 308-9064. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML

2/24/05

A handwritten signature in black ink, appearing to read "Martin Lerner", written over a horizontal line.

Martin Lerner
Examiner
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